

Received

MAR 9 3 2011 Office Of Air, Waste And Toxics

March 1, 2011

Mr. Doug Hardesty U.S. EPA, Region 10 1435 North Orchard Street Boise, ID 83706

Re:

EPA Outer Continental Shelf (OCS) Operating Permit – Shell Beaufort Sea Alaska Exploratory Drilling Program: Conical Drilling Unit Kulluk - Page 1 Revision

Dear Mr. Hardesty:

Please find enclosed a revised Page 1 to Shell's Supplement to EPA Outer Continental Shelf (OCS) Operating Permit Application - Shell Beaufort Sea, Alaska Exploratory Drilling Program: Conical Drilling Unit Kulluk. The page 1 submitted yesterday states that Shell anticipates drilling seasons to begin in July and continue through October 31. The new, revised page 1 clarifies that this time period applies to critical drilling operations. As reflected in the modeling scenarios in the application, the potential 120 days of operation as an OCS source could occur between July 1 and November 30.

To make this clearer, the new, revised page 1 adds the following new text:

Shell modeled the drilling seasons to begin in July and end November 30. However, Shell will end all critical drilling operations no later than October 31. Within this timeframe of July through November, the *Kulluk* could be an "OCS source" for a total of 120 days. At the earliest, drilling is planned to begin in July 2012 and will continue seasonally until subsurface resources are adequately defined.

Please feel free to contact Rodger Steen (303-807-8024) or Pauline Ruddy (907-771-7243) regarding any additional details. We appreciate your early attention to this application.

Sincerely,

Shell Offshore Inc.

Susce Childe

Susan Childs

Alaska Venture Support Integrator Manager

Attachment

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cc:

Natasha Greaves, EPA R10 Susan Childs, Shell Lance Tolson, Shell Pauline Ruddy, Shell Nicole StAmand, Shell Mark Schindler, Octane LLC Alan Schuler, ADEC, DAQ Kirk Lilley, Kirk Lilley PLLC Eric Hansen, ENVIRON Int. Kirk Winges, ENVIRON Int. Rodger Steen, Air Sciences Inc. Tim Martin, Air Sciences Inc.

## INTRODUCTION

Shell Offshore Inc. (Shell) proposes to conduct exploratory drilling using the *Conical Drilling Unit* (CDU) Kulluk (Kulluk) on the Outer Continental Shelf (OCS) in the Beaufort Sea, Alaska. A photograph of the Kulluk, an ice Class IV vessel designed for operation in the arctic environment, is provided in Figure 1-1, and lease block locations relevant to this application are shown in Figure 1-2. These leases are beyond the Alaska seaward boundary, which is three miles out from the shoreline, and are therefore administered for air permitting by Environmental Protection Agency (EPA) under the OCS air regulations in 40 CFR Part 55. This application seeks authority to operate on all OCS leases currently issued in the Beaufort Sea regardless of lease ownership.

Shell modeled the drilling seasons to begin in July and end November 30. However, Shell will end all critical drilling operations no later than October 31. Within this timeframe of July through November, the *Kulluk* could be an "OCS source" for a total of 120 days. At the earliest, drilling is planned to begin in July 2012 and will continue seasonally until subsurface resources are adequately defined.

The proposed program will minimize air quality impacts by employing selective catalytic reduction (SCR) and oxidation catalyst emissions control technology. Specifically, SCR will be used to control Nitrogen Oxides (NOx) emissions from the *Kulluk's* primary generators, as well as from the propulsion engines of the two ice management vessels. The *Kulluk's* primary generators will also have oxidation catalysts installed to control emissions of Particulate Matter with an aerodynamic diameter less than 2.5 microns (PM<sub>2.5</sub>), Volatile Organic Compounds (VOC), and Carbon Monoxide (CO). In addition, Shell is committing to purchasing only ultra-low sulfur diesel fuel (ULSD) for the project, which will practically eliminate Sulfur Dioxide (SO<sub>2</sub>) emissions.

The OCS air regulations distinguish between OCS sources located within 25 miles of a state's seaward boundary and those located beyond 25 miles of a state's seaward boundary. The latter are subject to federal requirements described in Section 5.13 of the OCS air regulations. The former are subject to the requirements that would apply if they were located in the "corresponding onshore area (COA)" (section 55.14). The COA in this case is the "Northern Alaska Intrastate Air Quality Control Region (AQCR)" listed under Alaska rules 18 AAC 50.015(c). The COA rules are contained in Alaska Regulations 18 AAC 50 and include Alaska new source review requirements. Most of the Beaufort Sea leases are within 25 miles of Alaska's seaward boundary, and so are subject to federal and COA requirements. The leases located beyond this line are subject only to the federal requirements.